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UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Llewellyn
Serial No.: 10/768,377
Filed: 1/30/2004
Art Unit: 3721
Examiner: Durand, Paul R.
Title: **TWO SHOT POWER NAILER**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Dear Sir:

Appellant now submits its Brief, subsequent to the Notice of Appeal filed March 24, 2006. Appellant petitions for a one-month extension of time. Fees for the one-month extension of time (\$120.00), and the fees for the submission of this appeal brief in the amount of \$500.00 are paid by the attached check. Any additional fees or credits may be charged or applied to Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds.

Real Party in Interest

The real party in interest in this application is Arrow Fastener Co., Inc. Ultimately, the assignee is a division of Masco Corporation.

Related Appeals and Interferences

There are no prior or pending appeals, interferences or judicial proceedings relating to this appeal, or which may direct effect or be directly effected by, or have a bearing on, the Board's decision in this appeal.

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01 FC:1402

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02 FC:1251

Status of Claims

Claims 1, 3-5, 17, 21 and 22 are pending, rejected and appealed.

Claims 10-13 stand withdrawn as being directed to a non-elected specie.

Claims 2, 6-9, 14, 15 and 18-20 are cancelled.

Status of Amendments

The examiner has made some 35 U.S.C. §112, second paragraph, rejections. On February 15, 2006, appellant filed an amendment that sought to address those 35 U.S.C. §112 rejections. By Advisory Action mailed March 6, 2006, the examiner refused entry. Thus, those amendments are not found in the most current claims.

Summary of the Claimed Subject Matter

This invention relates to a power nailer with a two-shot power drive.

As set forth in claim 1, the device has a first drive element (coil 22) for driving a plunger (26) in a first direction away from an attachment element to be driven (nail 30). The plunger stores energy in an energy storage mechanism (24) when moved in this first direction. A second drive element (coil 22) drives the plunger in a second direction opposed to the first direction. Also, the stored energy in the energy storage mechanism is released in combination with a power force from the second drive element to drive the plunger when moved in a second direction to drive the attachment element. The first and second drive elements are the same electric coil (22).

The inventive features of this claim when compared to the prior art center around a position sensor (50) (see Fig. 6) which senses the position of the plunger. A control receives a signal from the position sensor when the plunger reaches a rearwardly spaced position, and drives the plunger in a second direction once the position sensor has identified the plunger as being in this rearwardly spaced position. See paragraph 26.

Independent claim 7 is similar in scope to independent claim 1. However, the claim includes somewhat more detail, as an example being clear that the force storage mechanism is a spring.

Dependent claims 21 and 22 are drawn to independent claims 1 and 17, respectively. These claims recite that a control stores energy for driving the plunger in the second direction in a capacitor (see element 52 in Figure 6; paragraph 26). The energy is released after the position sensor indicates the plunger has reached the rearwardly spaced position.

The present invention utilizes stored energy, and releases the stored energy at the appropriate time. The prior art has attempted to provide a power nailer that stores energy from a return stroke (the movement in the first direction). However, the prior art has not properly timed the release, in that an actual position sensor was not utilized. Moreover, the capacitor storage device of the present invention also provides valuable benefits.

Grounds of Rejection to be Reviewed on Appeal

1. The 35 U.S.C. §112, Second Paragraph Rejection of Claims 1, 4, 5, and 21 is Appealed.
2. The 35 U.S.C. §102 Rejection of Claims 1, 3-5, 17, 21, and 22 Over the U.S. Patent 6,854,530 to Yiu is Appealed.

Arguments

The Rejection Under 35 U.S.C. §112, Second Paragraph

The claims stand rejected because in claim 1, in the last subparagraph, the term “said control” lacks antecedent basis. As mentioned, appellant is willing to substitute the word “a” for “said” in claim 1. However, the examiner refused entry of this amendment.

On the other hand, the claim is not properly rejected. It is quite clear to a worker of ordinary skill in the art that there is a control recited in this claim. While the control might not have been previously recited, a worker in this art would recognize what is meant by the limitation. In further support of this position, the second independent claim 17 specifically does recite “a” control.” Thus, reading the specification and claims in their entirety, a worker of ordinary skill in the art would certainly not find the claim indefinite.

For these reasons, reversal of this rejection is requested.

Rejection Under 35 U.S.C. §102The Rejection of Independent Claim 1 is Improper.

The Yiu patent does not disclose the required position sensor.

The examiner argues that the elements 36 and 37 in the Yiu reference would somehow meet the “position sensor” limitation. At best, these elements might monitor current to a coil in Yiu. However, they do not sense the position of the plunger. The position sensor “for sensing a position of said plunger” is required to meet the claims. What Yiu discloses are control elements that might interpret current, etc. Simply, this would not sense the actual position of a plunger, and could not properly meet the claims.

For the reasons set forth above, the rejection of claim 1 should be reversed.

The Rejection of Claim 17 is Separately Contested.

Claim 17 does not require the language of claim 1 with regard to the position sensor “for sensing a position of said plunger.” Instead, the claim simply requires that the control receives a signal from a position sensor “when said plunger reaches a rearwardly spaced position.” Again, Yiu does not disclose any sensor for sensing where a plunger is, and cannot properly be said to anticipate this claim.

For the reasons set forth above, the rejection of claim 17 should be reversed.

The Rejection of Claims 21 and 22 is Also Improper.

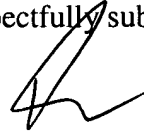
These claims are dependent to claims 1 and 17, respectively. The claims require that the control stores energy for driving a plunger in a capacitor, and that this energy is released after the position sensor indicates the plunger has reached a rearwardly spaced position. Here the examiner points to a disclosure of a capacitor in the Yiu patent as anticipating this claim. While Yiu does disclose capacitors 34, the capacitors 34 are not disclosed as providing any power function for driving the plunger. The actual function of the capacitors 34 in Yiu is ambiguous. It is not at all clear that the capacitors are utilized for driving a plunger at all. It is the examiner’s burden to show the claims have been anticipated, and simply, Yiu is ambiguous as to the function of the capacitors to properly reject these claims.

For the reasons set forth above, the rejection of claims 21 and 22 is separately improper and those rejections should be reversed.

Closing

For the reasons set forth above, the rejection of all claims is improper and should be reversed. Such action is earnestly solicited.

Respectfully submitted,

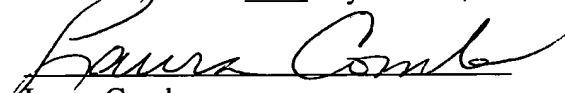


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Dated: June 19, 2006

CERTIFICATE OF MAIL

I hereby certify that the enclosed Response is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 19 day of June, 2006.


Laura Combs

CLAIMS APPENDIX

1. A device for driving an attachment element into a work piece comprising:
 - a first drive element for driving a plunger in a first direction away from an attachment element to be driven, and said plunger storing energy in an energy storage mechanism when moved in said first direction;
 - a second drive element to drive said plunger in a second direction opposed to said first direction, and release stored energy stored in said force storage mechanism in combination with a power force from said second drive element to said plunger when moved in said second direction to drive an attachment element;
 - said drive element for moving said plunger in said first direction and in said second direction being the same drive element, said drive element being an electric coil; and
 - a position sensor for sensing a position of said plunger, said control receiving a signal from said position sensor when said plunger reaches a rearwardly spaced position, and driving said plunger in said second direction once said position sensor has identified said plunger as being in said rearwardly spaced position.
3. A device as set forth in claim 1, wherein said coil tends to center said plunger within said coil, and said plunger first being positioned spaced toward the attachment element from a centered position, said plunger being pulled into said coil in said first direction and power to said coil being stopped before said plunger reaches a centered position, momentum carrying said plunger beyond said centered position; and against said force storage mechanism to transfer force to said force storage mechanism.
4. A device as set forth in claim 3, wherein said control and said force storage mechanism are designed such that said plunger stores energy in said force storage mechanism, and said second drive force is then initiated.
5. A device as set forth in claim 4, wherein said force storage mechanism is a coil spring.

17. A power nailer for driving a nail into a work piece comprising:

a plunger having a blade at a forward end, said plunger being guided within guides adjacent one end, and said blade being brought into contact with a nail received within said power nailing device;

a coil positioned to drive said plunger in a first and second direction;

a spring on an opposed side of said coil from said nail;

a coil for driving said plunger within said coil in a first direction, and away from said nail, said plunger moving to compress said spring, and transfer energy from said plunger to be stored in said spring, and said control then being operable to fire said coil to drive said plunger in said second direction such that a force on said plunger when moving in said second direction includes a force from said coil, and a force previously stored in said spring, said plunger then being brought into contact with said nail, driving said nail into a work piece; and

a control receiving a signal from a position sensor when said plunger reaches a rearwardly spaced position, and driving the plunger in said second direction once said position sensor has identified said plunger as being in said rearwardly spaced position.

21. A device as set forth in claim 1, wherein said control further storing energy for driving said plunger in said second direction in a capacitor, and said energy being released after said position sensor indicates said plunger has reached said rearwardly spaced position.

22. A power nailer as set forth in claim 17, wherein said control further storing energy for driving said plunger in said second direction in a capacitor, and said energy being released after said position sensor indicates said plunger has reached said rearwardly spaced position.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.